

In order to anticipate a claim under §102(b), a reference must contain all of the essential elements of the claim. “[A]n anticipation rejection requires a showing that each limitation of a claim must be found in a single reference, practice, or device.” *In re Donohue*, 766 F.2d 531, 226 USPQ 619, 621 (Fed. Cir. 1985). “It is axiomatic that for prior art to anticipate under §102, it has to meet every element of the claimed invention.” *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81, 90 (Fed. Cir. 1986). Accordingly, for a rejection under §102, a cited reference is required to show every element of any claim(s) rejected thereupon. MPEP §706.02(a). Campbell et al. fail to meet these statutory requirements.

Campbell et al. disclose a method of manufacturing a cardboard box with tape reinforced edges. More specifically, Campbell et al. teach a process whereby strips of tape are internally laminated between plies of cardboard that will become boxes. The strips of tape are intentionally located in the Campbell et al. process so that they extend along fold lines that ultimately will become the edges of erected boxes. When the boxes are erected by folding the cardboard blanks along their fold lines, the internal strips of tape extend around the

folded edges of the box and are said to provide reinforcement of these edges.

In the words of Campbell et al., "It is the essential feature of our invention that tapes are so placed into a carton or container blank as to re-enforce the score lines..." (Page 2, line 81). In order to accomplish this essential feature, strips of tape are inserted, according to Campbell et al., between the plies of the board from which the blank is to be cut and scored along lines that coincide with the subsequent fold lines of the completed carton (Page 1, line 45). The purpose of the tapes is to reinforce the edges of a cardboard box, prevent tearing of the cardboard along edges and cuts, and to act as a better hinge along the fold lines when the blanks are erected into cardboard boxes (Page 2, line 69).

The real problem with which Campbell et al. are concerned is not the reinforcement of box edges per se, but rather how to prevent the internally laminated strips of tape from becoming delaminated when fold lines are scored in the cardboard along the locations of the strips. This problem can be solved, according to Campbell et al., by scoring the cardboard while the adhesive, which bonds the tape strips to the plies between which the strips are laminated, is still wet. In this way, the plies and tape are free to move on each other during the scoring process before final adherence of the tape to its sandwiching

cardboard plies. It is important to note that nowhere do Campbell et al. discuss reinforcement of the various panels of a cardboard box nor do they disclose any process directed to such panel reinforcement.

In stark contrast to the teachings of Campbell et al., the present invention, as recited in the amended claims, is not concerned with reinforcing the folded edges of a paperboard carton. Instead, the present invention is directed to a method of strengthening selected panels (the side panels for example) of paperboard cartons to, among other things, enhance stackability. In this way, more desirable paperboard cartons can be used in situations where less desirable and more expensive micro-flute cartons (i.e. corrugated cartons) have been required in the past (i.e. where strength and stackability have been required).

A key distinction between the present invention and the disclosure of Campbell et al. is that in Campbell et al., strips of tape are laminated along *fold lines* whereas in the present invention, ribbons of reinforcing material are positioned to *overlie panel portions* of a paperboard web, which actually are defined on either side of *fold lines*. The teachings of Campbell et al. are just the opposite of the present invention. Campbell et al. teaches to apply strips of tape along fold lines and not

within the panels that they define whereas the present invention contemplates applying ribbons of reinforcing material within the panels and not along the fold lines.

To clarify the forgoing distinction, independent claim 1, as amended, now recites a method of making paperboard cartons that explicitly includes the step of progressively applying and adhering at least one ribbon of reinforcing material to the advancing web of paperboard, the ribbon having a width less than the width of the web of paperboard *and being positioned to overlie a selected panel portion of the web*. Campbell et al. fail to disclose or suggest such a step, but instead disclose not positioning a strip of tape to overlie a panel but instead positioning it along a score line that separates panels of the box. In fact, the method of amended claim 1 provides absolutely no reinforcement of the folded edges of the carton.

Accordingly, an argument that Campbell et al. impliedly teaches the claimed invention cannot be supported because the claimed invention does not provide edge reinforcement, which is the very goal and object of Campbell et al. In other words, Campbell et al. can not reasonably be considered to teach or suggest something that would not address the primary goal of Campbell et al. itself.

Since Campbell et al. fails to disclose each and every step recited in amended claim 1 and, in fact, discloses the opposite,

amended claim 1 now defines clearly over Campbell et al. and is in condition for allowance.

Claims 3-5, 7-8, 11-13, and 16 depend from claim 1 and thus include all of the limitations of claim 1. Some of these dependent claims also have been specifically amended to clarify further the placement of the ribbons of reinforcing material in panel portions of the paperboard web to reinforce panels, and not edges, of completed cartons. Accordingly, for at least the same reasons that independent claim 1 defines over Campbell et al., dependent claims 3-5, 7-8, 11-13, and 16 also define over this reference.

The only other independent claim, claim 25, likewise has been amended to clarify the positioning of the ribbons of reinforcing material within panel portions of the paperboard web and not along the fold lines. Specifically, amended claim 25 now recites the steps of advancing a web of paperboard along a path, the web of paperboard having a width and longitudinally extending panel portions that will become panels separated by fold lines in completed carton blanks; and laminating a ribbon of reinforcing material to the advancing web of paperboard, the ribbon having a width less than the width of the web of paperboard *and being positioned within a longitudinally extending panel portion of the web of paperboard.* As discussed above with regard to claim 1, this step is not disclosed by

Campbell et al. and can not reasonably be deemed to be suggested by Campbell et al. because it does not provide the very edge reinforcement sought by Campbell et al. Thus, independent claim 25, as amended, defines clearly over Campbell et al. because Campbell et al. fails to disclose every step of the claimed method as required for a proper rejection under 35 USC §102(b).

Claims 29-32, and 34 depend from independent claim 25 and therefore include all of its limitations. Thus, for at least the reasons discussed above regarding claim 25, claims 29-32, and 34 also define over the Campbell et al. reference.

#### Claim Rejections - 35 USC §103

Some claims have been rejected as being obvious under 35 USC §103(a). The determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on factual evidence.

*Burlington Indus., Inc. v. Quigg*, 822 F.2d 1581, 1584, 3 U.S.P.Q.2d 1436, 1439 (Fed. Cir. 1987). Initially, the PTO bears the burden of establishing the *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed Cir. 1984). To establish a *prima facie* case, the PTO must satisfy three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled

artisan to modify a reference or to combine references. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991). Lastly, the prior art reference or combination of references must teach or suggest all the limitations of the claims. See *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). To support a conclusion of obviousness, "either the references must expressly or impliedly suggest the claimed combination or the [PTO] must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int. 1985). In evaluating obviousness, the Federal Circuit stated that one must look to see if "the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have had a reasonable likelihood of success viewed in light of the prior art." *In re Dow Chemical Co. v. American Cyanamid Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988). Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's

disclosure." *Id.* In the present case, the Official Action fails to establish a prima facie case of obviousness under these required legal standards.

Claims 9-10 have been rejected under 35 USC §103(a) as being unpatentable over Campbell et al. in view of official notice taken by the Examiner that it is well known to print indicia on at least one ribbon of reinforcing material before adhering it to a web of paperboard. These claims have now been amended as discussed in detail above and Campbell et al. fail to teach or suggest the unique method now recited. Specifically, Campbell et al. fail to disclose the claimed steps of applying and adhering a ribbon of reinforcing material within panel portions of an advancing web of paperboard for reinforcing panels, and not edges, of completed cartons. This alone renders amended claims 9-10 allowable over the suggested combination because the combination fails to teach or suggest all the limitations of the claims; i.e. it fails to meet the third requirement of a prima facie case.

Even if Campbell et al. did suggest the limitations of the claims for which it is cited (it does not), Applicant is puzzled by and traverses the official notice taken by the Examiner. Neither Applicant nor the assignee of this application (which is a major world producer of paperboard cartons) is aware of any

process in the paperboard manufacturing industry where indicia is printed on a ribbon of reinforcing material before the ribbon is adhered to the panel portion of a paperboard web so that the ribbon reinforces a panel of the completed carton and the indicia is visible on the inside of the carton. Such a process certainly is not of such notorious character that official notice can be taken without supporting evidence. *In re Malcolm*, 129 F.2d 529, 54 USPQ 235 (CCPA 1942). Accordingly, Applicant requests that the Examiner cite a reference in support of his position pursuant to MPEP §2144.03. If the official notice is based upon personal knowledge of the Examiner, then Applicant officially requests an affidavit from the Examiner providing evidence and support for this personal knowledge so that Applicant may have the opportunity to contradict or explain the Examiner's personal knowledge. *id.*

Finally, a *prima facie* case of obviousness is not established in the Official Action because there is no reasonable expectation of success in the suggested combination. In fact, the combination of the purported official notice with Campbell et al. is absurd. The edge reinforcing tape of Campbell et al. is internally laminated between plies of cardboard along the folded edges of a cardboard box. It is not visible either inside or outside the box. If indicia were printed on the tape in Campbell et al., it would be forever

hidden between laminated plies of cardboard within the structure of the box. Therefore, there simply is no expectation of success in making the suggested combination and, in fact, there would only be expectation of failure because such an exercise would have no purpose and would waste time, ink, and require printing machinery, all for no reason.

The Official Action fails to establish a prima facie case of obviousness of claims 9-10 because none of the elements of a prima facie case are present. Thus, claims 9-10, as amended, are allowable over the suggested combination of Campbell et al. and the official notice.

Claims 6 and 33 have been rejected under 35 USC §103(a) as being unpatentable over Campbell et al. Claim 6 depends from independent claim 1 and claim 33 depends from independent claim 25. Claims 6 and 33 therefore include all of the limitations of their respective independent claims. These independent claims and the Campbell et al. application to them have been discussed in detail above. For at least the reasons proffered in that discussion, claims 6 and 33 also are allowable over Campbell et al.

Claims 2, 14-15, and 26-28 have been rejected under 35 USC §103(a) as being unpatentable over Campbell et al. in view of

Stone (US 5,551,938). These claims have all been amended, either directly and/or through amendments to their independent and intervening claims, and are allowable over the suggested combination in view of the following discussion.

The disclosure of Campbell et al. is discussed in detail above. Stone discloses a recloseable flip top box having an upstanding collar that aligns and secures the top of the box when it is hinged shut. It is stated in the Official Action that Campbell et al. do not disclose using paperboard (trim or otherwise) for the reinforcing ribbons. However, it is further stated, Stone teaches manufacturing a paperboard carton with a reinforcing collar made of "either paperboard, thick paper...or flexible plastic." It is then concluded that it would have been obvious to one of ordinary skill in the art to use a reinforcing ribbon made of paperboard trim or cull.

The Official Action fails to establish a prima facie case of obviousness with respect to this rejection, primarily because the third requirement of a prima facie case is not met. Specifically, the prior art reference or combination of references fail to teach or suggest all the limitations of the claims. Nowhere do these references, alone or in combination, teach applying ribbons of reinforcing material, regardless of its composition, to an advancing web of paperboard within panel portions thereof to result in reinforced panels of completed

cartons. Campbell et al. teach reinforcing folded edges and not panels as claimed. For at least this reason, and in view of the detailed discussion of independent claims 1 and 25 above, dependent claims 2, 14-15, and 26-28 are not rendered obvious by the suggested combination and this rejection should be withdrawn.

Improper Use of Hindsight

As the Federal Circuit states in *In re Dembiczaik*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999), "Our analysis begins in the text of Section 103 ... with the phrase 'at the time the invention was made.' For it is this phrase that guards against entry into the 'tempting but forbidden zone of hindsight,' when analyzing the patentability of claims pursuant to that section. Additionally, both the suggestion and the explanation of success must be found in the prior art not in the applicant's disclosure." *In re Dow Chem. Co. v. American Cyanimid Co.*, 837 F.2d at 473, 5 U.S.P.Q.2d at 1531.

Accordingly, It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). "Prior art may not be gathered with the claimed invention in mind." *Pentec, Inc. v.*

Graphic Controls Corp., 776 F.2d 309, 227 USPQ 766 (Fed. Cir. 1985).

In the present case, it appears distinctly possible that impermissible hindsight has been applied in gathering and analyzing the prior art references. Applicant's disclosure, and only Applicant's disclosure, teaches the positioning and fixing of ribbons of reinforcing material within panel portions of an advancing web of paperboard to reinforce selected panels of completed cartons. The primary reference, Campbell et al., discloses a method of strengthening folded edges of cardboard boxes with an internally laminated strip of tape, and has nothing to do with reinforcing panels of the box. No reference of record suggests modifying Campbell et al. by moving the strips of tape away from the score lines that will become the box edges and to the portions that will become the panels, and not the edges, of the completed cartons. In fact, to do so would destroy the very object of Campbell et al. to reinforce the edges. Accordingly, if, and to the extent, that the prior art has been gathered and analyzed with the present invention in mind, such is impermissible and cannot support an obviousness rejection under 35 USC §103.

Secondary Indicia of Unobviousness

Secondary considerations, including long felt need and commercial success, are evidence that an invention is not obvious and that patent protection for such an invention is justified. Both of these secondary factors are present in this case.

Prior to applicant's development of the present invention, paperboard cartons, while applicable to many packaging situations, generally were not considered suitable where enhanced carton strength and stackability were required. This was because the panels, and primarily the side panels, of paperboard cartons were not generally strong enough to support additional layers of such cartons stacked upon one another. Further, the resistance of paperboard cartons to "blow out" was considered inadequate in many instances where, for instance, the cartons would contain heavy items. As a consequence, in these and similar situations, carton manufacturers for years resorted to the use of micro-flute, a corrugated cardboard product, in these cartooning situations. While micro-flute was sufficiently strong and stackable, it was plagued with other problems not present with paperboard cartons, such as its excessive expense, the difficulty of printing high quality images on corrugated material because of its uneven surface, and the fact that standard packaging machines for packing items into paperboard cartons would not operate, without significant and expensive

modifications, to pack cartons made of micro-flute. A persistent need existed for a paperboard carton that also provided the panel strength and stackability of less desirable micro-flute. Applicant's invention has, at long last, fulfilled that need. The existence of the long felt need supports the patentability of the present invention.

As further evidence of this long felt need fulfilled, the reinforced paperboard cartons made using the claimed method have enjoyed unprecedented commercial success in the market. Attached hereto as Appendix B is the declaration of Steve McLary, attesting to the remarkable acceptance and sales of products made according to the invention in the few months since their introduction. The commercial success of this product supports the conclusion that it and the claimed method of making it are indeed unique and unobvious and entitled to patent protection.

In summary, the withdrawal of the prior final rejection is acknowledged. Claim 8 has been cancelled. Claims 1-7, 9-16, and 25-32 have been amended and recite a method of making paperboard cartons having unique attributes not taught or suggested by the art of record. Accordingly, these claims are

allowable over the art and an early notice of allowance is  
earnestly solicited.

Respectfully submitted,



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**APPENDIX A**

**MARKED-UP VERSIONS OF  
REWRITTEN CLAIMS**

1. (Twice Amended) A method of making [reinforced] paperboard cartons with selectively reinforced panels, said method comprising the steps of:

- (a) advancing a web of paperboard along a path, the web of paperboard having a width and longitudinally extending panel portions that will become panels separated by fold lines in completed paperboard cartons;
- (b) progressively applying and adhering at least one ribbon of reinforcing material to the advancing web of paperboard, the ribbon having a width less than the width of the web of paperboard and being positioned to overlie a selected panel portion of the web;
- (c) cutting the web of paperboard to form carton blanks having [panel portions] panels; and
- (d) forming the carton blanks into cartons for receiving articles, the ribbon of reinforcing material [providing reinforcement] reinforcing at least one [selected] panel portions of the cartons.

4. (Amended) A method of making reinforced paperboard cartons as claimed in claim 1 and wherein step (b) comprises applying a plurality of ribbons of reinforcing material to the advancing web of paperboard, [at predetermined locations across the width of the web] each of the ribbons of reinforcing

material being positioned to overlie a selected panel portion of  
the web.

5. (Twice Amended) A method of making reinforced paperboard cartons as claimed in claim 4 and wherein the web of paperboard has panel portions extending along opposed edge portions and wherein at least one of the plurality of ribbons of reinforcing material is [applied and adhered along each edge portion] positioned to overlie a panel portion extending along an opposed edge portion of the web of paperboard.

6. (Twice Amended) A method of making reinforced paperboard cartons as claimed in claim 4 and wherein step (b) further comprises applying and adhering a first ribbon of reinforcing material to said web of paperboard overlying a panel portion thereof and applying and adhering a second ribbon of reinforcing material [to] atop the first ribbon of reinforcing material to form a double thickness of reinforcing material [on] overlying the panel portion of the web.

7. (Twice Amended) A method of making reinforced paperboard cartons as claimed in claim 4 and wherein the web of paperboard has opposed edges and a panel portion intermediate the opposed edges, and wherein at least one of the ribbons of reinforcing

material is [applied and adhered] positioned to overlie the panel portion intermediate the opposed edges of the web.

11. (Amended) A method of making reinforced paperboard cartons as claimed in claim 1 and further comprising the step of scoring fold lines [in] between panel portions of the web of paperboard along which the carton blanks are folded in step (d) to form cartons.

25. (Amended) A method of making paperboard carton blanks comprising the steps of:

(a) advancing a web of paperboard along a path, the web of paperboard having a width and longitudinally extending panel portions that will become panels separated by fold lines in completed carton blanks ;

(b) laminating a ribbon of reinforcing material to the advancing web of paperboard, the ribbon having a width less than the width of the web of paperboard and being positioned [at a predetermined location on] within a longitudinally extending panel portion of the web of paperboard; and

(c) cutting the web of paperboard and laminated ribbon across their length into carton blanks [of a predetermined size and configuration] having panels, the [carton blanks defining panel portions and the] laminated ribbon [forming a layer of

reinforcement in] reinforcing at least one panel [portion] of each of the carton blanks.

30. (Twice Amended) A method of making paperboard carton blanks as claimed in claim 25 and wherein step (b) comprises laminating more than one ribbon of reinforcing material to the advancing web of paperboard, each ribbon having a width less than the width of the web of paperboard and being positioned [at respective predetermined locations on] within corresponding longitudinally extending panel portions of the web of paperboard to provide reinforcement in selected [panel portions] panels of the blank.

31. (Twice Amended) A method of making paperboard carton blanks as claimed in claim 30 and wherein [the web of paperboard has] panel portions extend along opposed edges of the paperboard web and wherein at least one of the ribbons of reinforcing material is [applied along] positioned within a panel portion along an edge of the web of paperboard.

32. (Twice Amended) A method of making paperboard carton blanks as claimed in claim 30 and wherein the web of paperboard has opposed edges wherein a panel portion extends along the web intermediate the opposed edges, at least one of the ribbons of

reinforcing material [is] being applied [at a location] within  
the panel portion intermediate the edges of the web of  
paperboard.

33. (Twice Amended) A method of making paperboard carton  
blanks as claimed in claim 30 and wherein at least one of the  
ribbons of reinforcing material is applied atop another one of  
the ribbons of reinforcing material within the panel portion to  
form multiple layers of reinforcing material [on] within the  
panel portion of said web of paperboard.